IN THE CLAIMS:

1. (Currently Amended) A drive control for an electric drive having a high level of control dynamics in the form of a meshed control structure comprising a rotational speed control loop, a current control loop arranged inside said rotational speed control loop, the rotational speed control loop comprising a controller with a proportional component and integral component and a phase saving lowpass filter selected from the group consisting of a PDT2 element and a Cauer filter for suppressing resonances in the controlled system, said filter tuned to the resonances to be suppressed with regard to frequency range and amplitude reduction, wherein said filter filters a range of frequencies wider than conventional lowpass filters, and with a substantially smaller phase drop; and whereas the PDT2 element utilizes the following second order differential equation:

$$u_k = V_F * (e_k + a_1 e_{k-1} + a_0 e_{k-2}) - u_{k-1} b_1 - u_{k-2} b_0$$

where u_k is the filter output in the computing cycle k, and e_k is the filter input in the computing cycle k; further wherein the Cauer filter is selected from the group consisting of a second order and an eighth order, and wherein as to the later utilizes the eighth order differential equation:

$$u_k = a_0 u_{k-1} + a_1 u_{k-2} + \ldots + a_7 u_{k-7} + b_0 e_k + b_1 e_{k-1} + \ldots + b_8 e_{k-8}$$

where u_k is the filter output in the computing cycle k, and e_k is the filter input in the computing cycle k.

2. (Previously Cancelled).

3. (Cancelled)

4. (Previously Cancelled).

5. (Cancelled)

6. (Previously Cancelled).

7-8 (Cancelled)

9. (Original) The drive control according to claim 1, wherein said electric drive drives a device selected from the group consisting of a numerically controlled machine tool and a robot.

10. (Currently Amended). A method for suppressing resonances in a controlled system of a control for an electric drive comprising using a PDT2 filtering element in [into] the control system, wherein said filter filters a range of frequencies wider than conventional lowpass filters, and with a substantially smaller phase drop, wherein and the PDT2 element of a second order and utilizes the following second order differential equation:

$$u_k = V_F * (e_k + a_1 e_{k-1} + a_0 e_{k-2}) - u_{k-1} b_1 - u_{k-2} b_0$$

where u_k is the filter output in the computing cycle k, and e_k is the filter input in the computing cycle k.

11. (Currently Amended) A method for suppressing resonances in a controlled system of a rotational speed control for an electric drive comprising using a PDT2 filtering element [into] in the control system, wherein said filter filters a range of frequencies wider than conventional lowpass filters, and with a substantially smaller phase drop, and wherein the PDT2 element is of a second order and utilizes the following second order differential equation:

$$u_k = V_F * (e_k + a_1 e_{k-1} + a_0 e_{k-2}) - u_{k-1} b_1 - u_{k-2} b_0$$

where u_k is the filter output in the computing cycle k, and e_k is the filter input in the computing cycle k..

12. (Currently Amended) A method for suppressing resonances in a controlled system of a control for an electric drive comprising using a Cauer filter [into] in the control system, wherein said filter filters a range of frequencies wider than conventional lowpass filters, and with a substantially smaller phase drop, wherein the Cauer filter is selected from a second order and an eighth order and wherein the eighth order differential equation:

$$u_k = a_0u_{k-1} + a_1u_{k-2} +...+ a_7u_{k-7} + b_0e_k + b_1e_{k-1} +...+ b_8e_{k-8}$$

where u_k is the filter output in the computing cycle k, and e_k is the filter input in the computing cycle k.

13. (Currently Amended) A method for suppressing resonances in a controlled system of a rotational speed control for an electric drive comprising using a Cauer filter [into] in the control system, wherein said filter filters a range of frequencies wider than conventional lowpass filters, and with a substantially smaller phase drop; wherein the

Cauer filter is selected from a second order and an eighth order and wherein , wherein the Cauer filter is selected from a second order and an eighth order and wherein the eighth order differential equation is:

$$u_k = a_0u_{k-1} + a_1u_{k-2} +...+ a_7u_{k-7} + b_0e_k + b_1e_{k-1} +...+ b_8e_{k-8},$$

where u_k is the filter output in the computing cycle k, and e_k is the filter input in the computing cycle k.